

**Practice Final Exam**  
**Microeconomics - EC 2106**  
**Instructor: Robert McNab**

1. Assume that Frank's video store in the town of Rome, GA can rent 2500 videos a month for the going market rate of \$2 per video. On average, Frank's total costs equal \$4000 per month, which is broken down into fixed costs of \$1000 per month and variable costs of \$3000 per month. There are 20 other video stores in Rome, GA that are similar to Frank's.
  - 1.1 Illustrate the short-run market and firm equilibrium and provide a numerical estimation of Frank's profits or losses. What do you think will happen to the number of video stores in Rome, GA? 5 points.
  - 1.2 Assume that a tornado destroys 10 of the 20 video stores in Rome, GA. Frank, being one of the lucky video store owner's, finds that he is now renting 4000 videos a month at the market rate of \$3 per video. Assume that Frank's total costs remain the same. Illustrate the short-run impact of the tornado on the market for video rentals and the typical firm in Rome, GA. 5 points.

2. Assume that the market for airline tickets between Atlanta and San Francisco is in equilibrium at a average price of \$345 per ticket with a equilibrium quantity of 225,000 round trip tickets sold per month. Your research staff has informed you that the price elasticity for the Atlanta-San Francisco airline ticket market is estimated at 0.85 while the income elasticity is estimated at 1.5. Furthermore, they have estimated that the cross-price elasticity between the market for Atlanta-San Francisco airline tickets and the Amtrak rail tickets is 0.95. Answer the following questions based on this information. 10 points

2.1 Assuming all else remaining equal, should you lower the price per airline ticket from Atlanta to San Francisco from \$345 to \$300? Provide a rationale for your answer. 3 points

2.2 Your sources in Washington D.C. have informed you that personal income is expected to increase by 3% in the coming year. Assuming all else remaining equal, what action should you take based on this information? What is the expected impact, all else remaining equal, on quantity demanded? 4 points

2.3 Amtrak announces a 50% price reduction in the price cross-country train tickets as a method of spurring the demand for train tickets. All else remaining equal, what impact can you expect this to have on the market for airline tickets between Atlanta and San Francisco? 3 points.

3. Assume that Merck Pharmaceuticals develops a non-toxic, non-addictive drug to prevent obesity and is rewarded a patent on the drug by the Federal Drug Administration. Initially, Merck produces 125 million units of the drug Meltaway each quarter and sells the drug at a price of \$15 per unit. At this quantity, Merck's total costs are \$500 million, with variable costs of \$250 million. The marginal cost of the last unit of Meltaway is estimated to be \$0.50. 10 points
- 3.1 Illustrate the short-run equilibrium described in (1). Make sure that you illustrate the ATC and AVC for the last unit of production. What is total revenue, total costs, and total profit/loss? 5 points.
- 3.2 Assume that after 2 years, researcher's discover that Meltaway also acts as a vaccine against most forms of cancer. Illustrate what might occur to demand and what affect this might have on the equilibrium price and quantity for the market for Meltaway. 5 points.
4. In your own words, explain the difference between movements along the demand curve and shifts in the demand curve. Ensure that you provide the reason why these movements/shifts might occur. 10 points.

5. In your own words, describe the differences between a purely competitive firm and a monopolistic firm. Graphically illustrate the difference between each of the types of firm making a profit or shutting down. 10 points

## Answer Key

1. Indicate whether the following statements represent a normative (N) or positive (P) statement.

**Positive** A flat tax on income would result in lower taxes for higher income families.

**Normative** A flat tax on income would be unfair since higher income families would pay less than under the current system of proportional taxation.

2. **Yes** Assume that the price of butter is \$2.25 a pound in Atlanta and \$1.75 a pound in Birmingham, Alabama. Assume that the transportation cost is equal to 2% of the cost of butter per pound. True or False: Arbitrage will result due to the difference in prices between Atlanta and Birmingham.

3. **True** As the slope of a demand curve increases, the price inelasticity of the good the demand curve represents decreases.

4. Which of the following statements is most accurate?

**A. All else remaining equal, if supply decreases and demand decreases, price will be ambiguous and quantity will decrease.**

5. Assume that goods A and B are complements. All else remaining equal, if the price of good B increases, then the demand for good A will:

**B. Decrease**

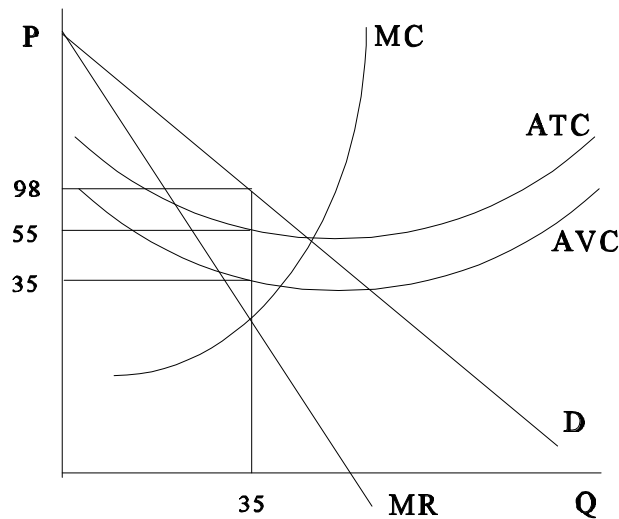
6. Assume that a purely competitive firm is operating in long-run equilibrium and market demand increases by 10%. In the long-run, the firm will:

**B. Break Even**

7. When price is \$2500, the quantity demanded for 400-MHz computers is 850,000. When price falls to \$1000, the quantity demanded increases to 1,250,000. What is the price elasticity of demand for 400-MHz computers?

- a. 2.25
- b. 0.224
- c. 4.45
- d. 0.445**
- e. None of the above

Illustration 1



8. Illustration 1 is an example of what type of firm:

**Monopolist**

9. Which of the following statements most accurately depicts the firm in Illustration 1:

**The firm is making normal and economic profits.**

Use the following to answer questions 10-11:

You have been hired as a consultant for the city of Atlanta and are tasked to provide policy solutions that would help alleviate the low-income housing problem within the city of Atlanta. Using housing data, you determine that the equilibrium rent for 1000 square foot luxury apartments in Buckhead is \$1500 a month for 10,500 units rented, while 1,000 square foot luxury apartments near the airport rent for \$1200 a month for 5,500 units rented.

10. Assume that the city council passed the motion setting the maximum rent for 1,000 (or greater) square foot apartments in the city of Atlanta at \$1350 per month. What statement most accurately describes the impact on the apartment for luxury apartments?

**There would be a shortage of apartments in Buckhead and a surplus of apartments near the airport.**

11. Assume that the city council passed the motion setting the minimum rent for 1,000 (or greater) square foot apartments in the city of Atlanta at \$1000 per month. What statement most accurately describes the impact on the apartment for luxury apartments?

**There would be no impact since the minimum rent is below the equilibrium price near the**

**airport.**

Use the following statement to answer questions 12-15:

Assume that the market for computer flight simulation games is in equilibrium at a price of \$45 with a equilibrium quantity of 1,925,000 units sold per month. Your research staff has informed you that the price elasticity for your flight simulation game is estimated at 3.2 while the income elasticity is estimated at 1.25. Furthermore, they have estimated that the cross-price elasticity between your computer software game and joysticks is -2.5.

12. You are approached with a proposal to reduce the price of your company's simulation games from \$45 to \$40 a game. What impact will this have on quantity demanded, assuming all else remaining equal?

**Quantity demanded will increase by approximately 36%.**

13. If your company decides to decrease price from \$45 to \$40, what impact will this have on total revenues?

**Total revenues will increase from approximately \$86 million to \$104 million.**

14. Assume that your research staff forecasts that personal income will decline by 10% next year, what impact, assuming all else remaining equal, can you expect this event to have on the quantity demanded for simulation games?

**None of the above.**

15. Which of the following statements best describes the computer simulation games that you sell?

**The games are a luxury good and have a variety of substitutes.**

Use the following table to answer questions 16.

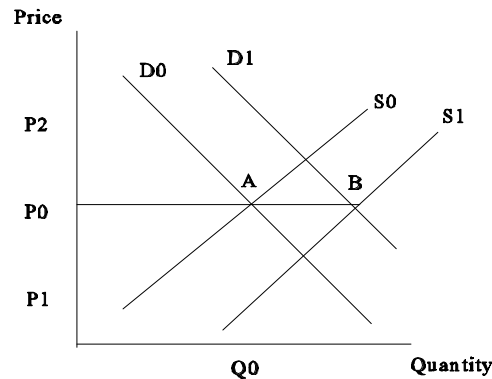
United States	20 hours labor = 20 computers 20 hours labor = 3 cars
Mexico	20 hours labor = 4 computers 20 hours labor = 6 cars

16. Assuming that trade occurs between the United States and Mexico, which statement best represents the post-trade equilibrium?

**The United States will produce 40 computers and Mexico will produce 12 cars.**

17. Which statements most accurately describes the gains from trade?

**On the whole, 3 more cars and 16 more computers will be produced.**



18. Assume that the initial equilibrium is point A, the intersection of the Demand curve D0 and the Supply curve S0. If the government imposed a price floor of P1, what would occur?

**No effect**

19. Assume that the initial equilibrium is point B, the intersection of the Demand curve D1 and the Supply curve S1. If demand declined from D1 to D0, what would occur to equilibrium price and quantity?

**Price and quantity would decrease.**

Assume that Frank's video store in the town of Rome, GA can rent 2500 videos a month for the going market rate of \$2 per video. On average, Frank's total costs equal \$4000 per month, which is broken down into fixed costs of \$1000 per month and variable costs of \$3000 per month. There are 20 other video stores in Rome, GA that are similar to Frank's.

20. What will occur over time to the number of video stores in Rome, GA?

**Increase**

21. Which of the following statements would you use to justify your answer to Questions 20?

**The number of video stores will increase since the video stores are profitable.**

Assume that a tornado destroy's 10 of the 20 video stores in Rome, GA. Frank, being one of the lucky video store owner's, finds that he is now renting 4000 videos a month at the market rate of \$3 per video. Assume that Frank's total costs remain the same.



22. Why does Frank find himself renting more videos?

**Supply decrease.**

23. In the short-run, which of the following states is most accurate?

**Frank's video store will be as efficient in the long-run and will make a short-run profit.**

24. Which of the following conditions is not necessary for price discrimination to occur?

**The firm must be able to make a profit.**

25. Which of the following are part of the opportunity cost of going to a football game instead of watching it on TV?

**All of the above.**

26. Which of the following statements is most accurate?

**As the price of a complementary good increases, the demand for the good it complements decreases.**

27. Which is the following statements is not true?

**Shortages and scarcity are a result of government policy.**

28. **False** A perfectly competitive firm will seek to maximize long-run profits.

29. **False** If a union sets a wage that maximizes total union members' income, all union members will be employed.

30. **False** Comparative advantage is the ability to perform an activity at the highest opportunity cost.

## Short-Essay

1. See Midterm 2 Answer Key
2. See Midterm 1 Answer Key
3. See Midterm 2 Answer Key
4. See Midterm 1 Answer Key
5. See Practice Midterm 2 Answer Key